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HAMILTON & TERRILE, LLP			MOORE, IAN N	
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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/897,189	<b>Applicant(s)</b> BUCKMAN ET AL.	
	<b>Examiner</b> Ian N. Moore	<b>Art Unit</b> 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 23-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 13-21 is/are rejected.
- 7) ☒ Claim(s) 9-12 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Claims 1-22 in the reply filed on 5/6/2005 is acknowledged.

### *Specification*

2. The attempt to incorporate subject matter into this application by reference to U.S. patent application entitled "A system and method for allocating bandwidth across a network" in page 81, lines 21-23 is ineffective because **a serial number of the application is not disclosed.**

### *Claim Objections*

3. Claim 7 is objected to because of the following informalities:

Claim 7 recites, "the classifier" in line 19. For clarity, it is suggested to change "the classifier" to "**the** classify engine" since it refers back to "a classify engine" in claim 1.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Ben Nun (US006831893B1).

**Regarding Claim 14**, Ben Nun discloses a system for processing packets in a best effort network (see FIG. 2, a network monitoring and classifying system 200), the system comprising:

a processor blade interface (see FIG. 2, Data path 230 and 240) operable to accept packets having classification information (see FIG. 2, classifier 260; see col. 7, lines 2-35);

a processor blade bus (see FIG. 2, packet processor PPN bus) in communication with the processor blade interface (see FIG. 2, Data path 230 and 240), the processor blade bus having plural ports (see FIG. 2, ports PP1-PPN; see col. 8, lines 38 to col. 9, lines 5); and

one or more processor blades (see FIG. 2, Packet Processors 0-N), each processor blade in communication with a processor blade port (see FIG. 2, PP1-PPN ports) and having a function associated with a predetermined classification information (col. 8, lines 38 to col. 10, lines 60).

6. Claim 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Haddock (US006104700A).

**Regarding Claim 19**, Haddock discloses a method for routing Internet packets (see FIG. 1A, Switch 100 routing IP packets; see col. 1, lines 33-37; see col. 5, lines 15-49), the method comprising:

classifying the packets into one or more packet flows according to classification rules (see FIG. 1B, a combined system of packet classification 150, comparison engine 155, and enqueue 161; see col. 4, lines 60-67; col. 6, lines 25-55; classify and evaluates traffic groups)

routing each packet flow to a predetermined port (see FIG. 1B, QoS queue 180) of a processor (see FIG. 1B, a combined system of QoS Queues 180 and Dequeue 162), each port having an associated function, so that the packets flow through the processor as a data path (see col. 4, lines 60-67; see col. 6, lines 1-15);

programming the classification rules and functions through a control path that looks across packet flows of the data path (see FIG. 1B, a combined system of network manager user interface 145, Buffer manager 165, QoS evaluation 175, and scheduler 170; see col. 4, lines 60-67; see col. 5, lines 1-67; see col. 6, lines 55 to col. 7, lines 56).

**Regarding Claim 20**, Haddock discloses interfacing a processor blade (see FIG. 1B, QoS queues 180) with the data path, the processor blade having an associated function (see col. 4, lines 60-67; see col. 6, lines 1-55);

and routing a packet flow (see FIG. 1B, packet flow) to the processor blade, the packet flow having a classification associated with the function of the processor

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blade (see col. 4, lines 60-67; col. 6, lines 25-55; each classified and evaluates traffic group is routed to corresponding/associated QoS queue).

**Regarding Claim 21**, Haddock discloses programming a dataflow program, the method further comprising:

detecting a new packet type (see FIG. 1B, a combined system of packet classification 150, comparison engine 155, and enqueue 161; see col. 4, lines 60-67; col. 6, lines 25-55; detects/evaluates received packet's traffic group); and

performing reflective programming to program a dataflow program that classifies the new packet type (see FIG. 1B, a combined system of network manager user interface 145, Buffer manager 165, QoS evaluation 175, and scheduler 170 programs/manages to classify the packet's traffic group type; see col. 4, lines 60-67; see col. 5, lines 1-67; see col. 6, lines 55 to col. 7, lines 56).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1,2,7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haddock (US006104700A) in view of Yoshizawa (US006262983B1).

**Regarding Claim 1**, Haddock discloses a broadband Internet node (see FIG. 1A, Switch 100) comprising:

a classify engine (see FIG. 1B, a combined system of packet classification 150, comparison engine 155, and enqueue 161) interfaced with the network (see FIG. 1A-B, network; see col. 3, lines 45-50; see col. 4, lines 5-25; see col. 8, lines 45-55), the classify engine operable to accept packets from the network and determine classification information for each packet (see col. 4, lines 60-67; col. 6, lines 25-55; classify and evaluates traffic groups);

a modify/process engine (see FIG. 1B, a combined system of QoS Queues 180 and Dequeue 162), interfaced with the classify engine, the modify/process engine having plural ports (see FIG. 1B, plurality of QoS queues 180), each port having an associated function (see col. 4, lines 60-67; see col. 6, lines 1-15);

a controller (see FIG. 1B, a combined system of network manager user interface 145, Buffer manager 165, QoS evaluation 175, and scheduler 170) interfaced with the classify engine and the modify/process engine, the controller programming the classify engine to route each packet to a predetermined port of the modify/process engine based on the classification information of the packet (see col. 4, lines 60-67; see col. 5, lines 1-67; see col. 6, lines 55 to col. 7, lines 56).

Haddock does not explicitly disclose a classify engine interface with the Internet. However, Yoshizawa teaches a classify engine (see FIG. 2, packet classification unit 10) interfaced with the Internet (see col. 2, lines 60-67; Internet) and determine classification for each packet (see col. 3, lines 45-59; see col. 4, lines 30-45; see col. 5, lines 15-40). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to interface with Internet,

as taught by Yoshizawa in the system of Haddock, so that it would improve the transmission speed and throughput of the network; see Yoshizawa col. 1, line 50-65; and Haddock also suggests that the system would equally applicable to other types of network in order to provide variety of scheduling mechanism; see col. 4, lines 5-10; see Haddock col. 2, lines 28-50.

**Regarding Claim 2**, Haddock discloses a processor blade interface (see FIG. 1B, an interface between QoS queues 180 and Enqueue 161) in communication with the classify engine (see FIG. 1, a combined system of packet classification 150, comparison engine 155, and enqueue 161);

a processor blade bus in communication with the processor blade interface (see FIG. 1B, a bus that connects an interface between QoS queues 180 and Enqueue 161), the processor blade bus having plural ports (see FIG. 1B, a bus has plural ports for QoS queues 180); and

one or more processor blades (see FIG. 1B, QoS queues 180), each processor blade in communication with a processor blade bus port (see FIG. 1B, a QoS queue ports towards the bus), each processor blade having an associated function for operating on packets having predetermined classification information (see col. 4, lines 60-67; see col. 6, lines 1-55).

Yoshizawa also discloses a processor blade interface (see FIG. 1, an interface to packet processing program processor 20) in communication with the classify engine (see FIG. 1, packet classification unit 10);



a processor blade bus in communication with the processor blade interface (see FIG. 1, a bus that connects an interface between packet processing program processor 20), the processor blade bus having a port (see FIG. 1, a bus has a port/interface to packet processing program processor); and

one or more processor blades (see FIG. 1, packet processing program processor 20), each processor blade in communication with a processor blade bus port, each processor blade having an associated function for operating on packets having predetermined classification information (see col. 3, lines 10-67; see col. 5, lines 1-20).

**Regarding Claim 7**, Haddock discloses wherein the controller programs the classifier with a dataflow program that determines classification information for the packets (see col. 4, lines 60-67; see col. 5, lines 1-67; see col. 6, lines 55 to col. 7, lines 56). Yoshizawa also discloses wherein the controller (see FIG. 2, Header processor 250) programs the classifier with a dataflow program that determines classification information for the packets (see col. 6, lines 20-45; see col. 7, lines 9 to col. 8, lines 36).

**Regarding Claim 13**, Haddock discloses wherein the dataflow program comprises instruction to program an additional dataflow program (see col. 4, lines 60-67; see col. 5, lines 1-67; see col. 6, lines 55 to col. 7, lines 56). Yoshizawa also discloses wherein the dataflow program comprises instruction to program an additional dataflow program (see col. 6, lines 20-45; see col. 7, lines 9 to col. 8, lines 36).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haddock in view of Yoshizawa as applied to claim 1 above, and further in view of Oran (US006418125B1).

**Regarding Claim 3**, the combined system of Haddock and Yoshizawa discloses the processor blade as described above in claim 2.

Neither Haddock nor Yoshizawa explicitly disclose an audio mixer having a function that mixes voice over Internet packets to support conference calls. However, Oran discloses one of the processor comprises an audio mixer (see FIG. 4, DSP 40) having a function that mixes voice over Internet packets to support conference calls (see FIG. 4, conferences between 24 and 26; see col. 4, lines 6-67; see col. 7, lines 40-44; DSP mixes/combined multiple audio/voice over Internet packets (VoIP) from multiple speakers 26 to support conferencing).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a processor with an audio mixer for VoIP packets conferencing, as taught by Oran, in the combined system of Haddock and Yoshizawa, so that it would provide the audio packet management system that intelligently selects which audio packets to mix together; see Oran col. 1, line 40-67.

10. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haddock in view of Yoshizawa as applied to claim 1 above, and further in view of Deb (US006172990B1).

**Regarding Claim 4**, the combined system of Haddock and Yoshizawa discloses the processor blade as described above in claim 2.

Neither Haddock nor Yoshizawa explicitly disclose encryption. However, Deb discloses a processor (see FIG. 2 A-B, micro-RISC stream processor 114 a-b) having a function that encrypts packets (see col. 8, lines 26-42; 44-67; a processor encrypts packets).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide packet encryption, as taught by Deb, in the combined system of Haddock and Yoshizawa, so that it would provide a user the ability to selectively encrypt and decrypt packets on demand and prevent forwarding of packets unprotected; see Deb col. 8, line 30-36.

**Regarding Claim 5**, the combined system of Haddock and Yoshizawa discloses the processor blade as described above in claim 2.

Neither Haddock nor Yoshizawa explicitly disclose filters. However, Deb discloses a processor (see FIG. 2 A-B, micro-RISC stream processor 114c) having a function that filters packet content (see col. 9, lines 60 to col. 10, lines 5, 25-32; a processor filters packets).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide packet encryption, as taught by Deb, in the combined system of Haddock and Yoshizawa, so that it would provide ability to selectively filter desired packets and increase the transmit and receive packet

processing rates while reducing a host CPU's processing burden; see Deb col. 9, line 60-67; see Deb col. 3, lines 55-59.

**Regarding Claim 6**, the combined system of Haddock and Yoshizawa discloses the processor blade as described above in claim 2.

Neither Haddock nor Yoshizawa explicitly disclose searching packet content. However, Deb discloses a processor (see FIG. 2 A-B and 3, micro-RISC stream processor 114a-b) having a function that searches packet content (see FIG. 4A-C, step 408; searching/examining received packet content; see col. 13, lines 24-55; see col. 16, lines 55-67; see col. 18, lines 45-59; see col. 19, lines 59 to col. 20, lines 24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide packet content searching, as taught by Deb, in the combined system of Haddock and Yoshizawa, so that it would increase the transmit and receive packet processing rates while reducing a host CPU's processing burden; see Deb col. 9, line 60-67; see Deb col. 3, lines 55-59.

11. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haddock in view of Yoshizawa as applied to claim 1 above, and further in view of Karol (US006628617B1).

**Regarding Claim 8**, Haddock discloses the classify engine to detect packets (see col. 4, lines 60-67; col. 6, lines 25-55) and the controller is further operable to program the classify engine with a new dataflow program that creates a new queue

(see col. 4, lines 60-67; see col. 5, lines 1-67; see col. 6, lines 55 to col. 7, lines 56). Yoshizawa also discloses the classify engine to detect packets (see FIG. 1, packet classification unit 10) and the controller (see FIG. 1, packet processing program processor 10) is further operable to program the classify engine with a new dataflow program that creates a new connection (see FIG. 1, routing processor 5; see col. 3, lines 10-67; see col. 5, lines 1-20; see col. 6, lines 20-45; see col. 7, lines 9 to col. 8, lines 36).

Neither Haddock nor Yoshizawa explicitly disclose creating a new TCP connection. However, Karol discloses to detect packets associated with a new TCP connection and the controller is further operable to program the classify with a new dataflow program that creates a new queue for the new TCP connection (see FIG. 6, steps 601,603,605,607,609,611, classifying packet type; receiving/detecting TCP packet with SYN flag set for a new connection and creating/setting-up a new flow for a new connection; see col. 9, lines 35-51; see col. 8, lines 11-55).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide packet encryption, as taught by Karol, in the combined system of Haddock and Yoshizawa, so that it would avoid large buffer and avoid loss of datagram by properly classifying/setting up the connection; see Karol col. 82, line 13-63.

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haddock in view of Ben Nun in view of Oran (US006418125B1).

**Regarding Claim 15**, Ben Nun discloses the processor blade as described above in claim 14.

Ben Nun does not explicitly disclose an audio mixer having a function that mixes voice over Internet packets to support conference calls. However, Oran discloses one of the processor comprises an audio mixer (see FIG. 4, DSP 40) having a function that mixes voice over Internet packets to support conference calls (see FIG. 4, conferences between 24 and 26; see col. 4, lines 6-67; see col. 7, lines 40-44; DSP mixes/combined multiple audio/voice over Internet packets (VoIP) from multiple speakers 26 to support conferencing).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a processor with an audio mixer for VoIP packets conferencing, as taught by Oran, in the system of Ben Nun, so that it would provide the audio packet management system that intelligently selects which audio packets to mix together; see Oran col. 1, line 40-67.

13. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ben Nun in view of in view of Deb (US006172990B1).

**Regarding Claim 16**, Ben Nun discloses the processor blade as described above in claim 14.

Ben Nun does not explicitly disclose encryption. However, Deb discloses a processor (see FIG. 2 A-B, micro-RISC stream processor 114 a-b) having a function that encrypts packets (see col. 8, lines 26-42; 44-67; a processor encrypts packets).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide packet encryption, as taught by Deb, in the system of Ben Nun, so that it would provide a user the ability to selectively encrypt and decrypt packets on demand and prevent forwarding of packets unprotected; see Deb col. 8, line 30-36.

**Regarding Claim 17**, Ben Nun discloses the processor blade as described above in claim 14.

Ben Nun does not explicitly disclose searching packet content. However, Deb discloses a processor (see FIG. 2 A-B and 3, micro-RISC stream processor 114a-b) having a function that searches packet content (see FIG. 4A-C, step 408; searching/examining received packet content; see col. 13, lines 24-55; see col. 16, lines 55-67; see col. 18, lines 45-59; see col. 19, lines 59 to col. 20, lines 24).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide packet content searching, as taught by Deb, in the system of Ben Nun, so that it would increase the transmit and receive packet processing rates while reducing a host CPU's processing burden; see Deb col. 9, line 60-67; see Deb col. 3, lines 55-59.

14. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haddock in view of Ben Nun in view of Dharanikota (US 20020107908A1).

**Regarding Claim 18**, Ben Nun discloses the best effort network as described above in claim 14.

Ben Nun does not explicitly disclose an Internet service provider Intranet.

However, an Internet service provider, ISP, Intranet is well known in the art.

Dharanikota discloses wherein the best effort network comprises an Internet service provider Intranet (see FIG. 1, ISP network 102; see page 3, paragraph 27, 31).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide ISP intranet, as taught by Dharanikota, in the system of Ben Nun, so that it would facilitate Internet-based services and provides monitoring system for network element operable in a trusted domain network such as ISP network; see Dharanikota see page 1, paragraph 11 and see page 3, paragraph 27.

#### ***Allowable Subject Matter***

15. Claims 9-12 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on M-F: 9:00 AM - 6:00 PM.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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